

Abstract

The present invention is directed to a method of modeling a complex system, the model produced by such a method, and a method of optimizing a complex system by optimizing such a model. The first step in the modeling method is to identify the activities that comprise the process. Measurable drivers for each activity are identified. The costs associated with each driver are identified as fixed and, where appropriate, variable components. Each activity is then represented as a function of its driver's cost components. Relationships between the drivers that are relevant to more than one activity are derived. A function that represents the process is built using the derived relationships. The model (function) thus produced is an expression of the entire process in terms of variables that are drivers for more than one activity within the process. Optimizing the modeled process is accomplished by optimizing the model constructed as described above for certain selected objective(s). The model can be modified by changing constraints thus enabling the user to run through a large number of "what if" scenarios to determine what is the best solution under varying conditions.